

Contraception Use among African American and Caucasian College Students

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Abstract

Unintended pregnancies, totaling nearly 3 million each year in the U.S., are associated with increased health risks for both the mother and baby. Former research has shown women of racial minorities are at disproportionately higher risks for unintended pregnancy as a result of less effective contraceptive behaviors. This study aimed to explore the differences in contraceptive behaviors amongst racial subgroups. The purpose of this secondary analysis was to analyze women's contraceptive choices and determine if there are differences between those of African American and Caucasian women. Women (N = 196; 32% African American) ages 18 – 30 years were recruited for the parent study from a large Midwestern university through internet newsletters. Interested women contacted the PI (second author) who explained the purposes of the study. Those interested were given a secure, on-line link in which to complete informed consent and fill out the study questionnaires. For this analysis a survey using closed- and open-ended questions asking about contraceptive practices was implemented. Data were analyzed with descriptive statistics and chi-square tests. Findings indicated oral contraceptives, condoms, the morning after pill, and withdrawal were the most used by women as contraceptive methods. Additionally, the study revealed oral contraceptives use was significantly more likely by Caucasian women. Although there was not a significant relationship in this sample, results showed African American women reported using the NuvaRing® or no method more than Caucasian women. This information identifies disparities within contraceptive use and helps guide research and practice in discerning underlying mechanisms in contraceptive behaviors.

Contraception Use among African American and Caucasian College Students

Unintended pregnancies, those that are mistimed, unplanned, or unwanted at the time of conception, account for nearly half of all pregnancies within the United States (Centers for Disease Control and Prevention [CDC], 2013b). Unintended pregnancy is associated with increased health risks for both the mother and the baby. Women who experience unintended pregnancy may not be in optimal child-bearing health. Not having expected nor planned to become pregnant, these women may have delayed prenatal care, deferred health management, and engaged in risky behavior such as alcohol or substance use, all of which can have serious harmful effects on pregnancy. African American women are disproportionately affected by unintended pregnancy, and thus are at increased risk for its associated complications.

Unintended pregnancy results primarily from the lack of consistent, effective, and proper contraceptive use. Within the United States, birth control is being used by most women of reproductive age; 99% of women who have ever had sexual intercourse have used at least one method of contraception. However, of women of childbearing age who do not wish to get pregnant, 11% do not use contraception, putting themselves at exponentially higher risks for unintended pregnancy (Jones, Mosher, & Daniels, 2012).

These rates of contraception use overall and by contraceptive method have been shown in previous studies to vary within subgroups, specifically those defined by age, relationship status, and race; however, it is not clear if these findings still exist in more recent years. This study serves as an informative investigation to determine current contraceptive behaviors and associated racial disparities amongst African American and Caucasian women of a large Midwestern university.

Three research questions were developed to investigate contraceptive use amongst African American and Caucasian college students:

1. What were the different types of methods women have used in the past?
2. What were the different types of methods women use currently?
3. Were there differences in contraceptive method use by ethnic group?

Review of Literature

On December 2nd, 2010, the U.S. Department of Health and Human Services revealed the new *Healthy People 2020* agenda for improving the overall health of all Americans. Within its objectives for the next ten years, *Healthy People 2020* acknowledged the need for improvement in family planning and preventing unintended pregnancy. (U.S. Department of Health and Human Services, 2013). This need is widely supported by the data produced through the Center for Disease Control claiming that 49% of pregnancies within the U.S. in 2006 were unintended, a slightly higher proportion than the 48% of unintended pregnancies reported in the data collected in 2001 (CDC, 2013b). Although the CDC reports that 99% of sexually active women in the U.S. have previously used some form of contraception, their data also revealed that 11% of women who are of childbearing age and do not wish to become pregnant are not using contraception. This data suggests inconsistency in contraception use, resulting in ineffective family planning and unintended pregnancies.

In addition to the CDC's data on nationwide unintended pregnancies, the *National Health Statistics Reports*, "Intended and Unintended Births in the United States: 1982–2010" revealed that African American women were more likely to experience unintended births than Caucasian women (Mosher, Jones, & Abma, 2012). A review of literature discovered several other studies whose findings also supported this disparity. For example, a study conducted by Gaydos,

Neubert, Hogue, Kramer, and Yang and published in the *Journal of Women's Health* compared birth control use amongst African American and Caucasian students and nonstudents and found that both African American students and African American nonstudents were more likely than their Caucasian counterparts to forego use of contraception (2010). Additionally the study reported that there is a greater disparity in the use of effective birth control methods amongst African American and Caucasian students than African American and Caucasian nonstudents. The study concluded that although race is not a significant predictor of overall contraceptive use among students, racial disparities are magnified among student populations with regard to the use of highly effective contraceptives.

One study published by *Perspectives on Sexual and Reproductive Health* reported in its findings a higher proportion of older women, Hispanic and Black women, and less educated women reported contraceptive nonuse throughout the entire year during which the study was conducted than the younger, white, and college-educated women participating in the study (Frost, Singh, & Finer, 2007). The journal published another study four years later reporting findings similarly indicative of racial disparity in contraception use. The study reported Black and foreign-born Asian women were less likely than white women to use high-efficacy reversible methods (hormonal contraceptives or intrauterine devices (IUDs)) (Shih, Vittinghoff, Steinauer, & Dehendorf, 2011).

From these literature findings it is evident that disparities in contraceptive use are contributing factors to the disproportionate rates of unintended pregnancy amongst African American and minority women in comparison to Caucasian women. While there has been an increase in investigation of contraceptive use amongst racial subgroups in recent years, several of these research studies only reveal use versus nonuse; few studies offer significant findings in

regards to specific contraceptive use in relation to racial identity. Identifying these specific variances is a crucial first step in identifying trends within contraceptive disparities and determining the motivating factors behind contraceptive behaviors. Once these aspects of contraception use have been recognized, opportunities for education and intervention can be determined and utilized by healthcare professionals in promoting effective prevention of unintended pregnancy.

Design and Methods

This study was a secondary analysis from a larger study examining ethnic identity and tolerance to infidelity (Moore, 2012). A descriptive design was employed to examine the purpose of this study.

Sample

The sample for this and the larger parent study was used with a convenience sample of women from a large, Midwestern university. The sample consisted of 196 participants: 68% Caucasian/European American women ($n = 133$) and 32% African American women ($n = 63$). The total sample ranged in age from 18-30 years ($M = 22.1$; $S.D. = 3.1$).

Procedures

After Human Subjects approval was obtained for the parent study through the university's Institutional Review Board, participants were recruited from a large Midwestern university through internet newsletters. Inclusion criteria required that all participants identified as either African American or Caucasian/European American. Interested women contacted the PI (second author) who explained the purposes of the study. Those who chose to participate were then given a secure, on-line link through which to complete informed consent and complete the study questionnaires. After completion of the informed consent and the questionnaires,

participants were given an option by sending a separate email with their mailing address to request an honorarium, which all participants did. Participants were compensated \$10 for their time invested in study involvement.

Measures

This section only reports on the questions used for this secondary analysis. Women were given a list of 11 contraceptive techniques. They were asked to respond to whether they had used these practices in the past and whether they were using them presently.

Data Analysis

The data from the questionnaires were analyzed using the Statistical Package for the Social Sciences (SPSS), Version 18 Predictive Analytics Software. Data were analyzed by research question. Research questions one and two inquiring about types of methods used in the past and currently were analyzed using descriptive statistics. The third research question investigating differences in contraceptive method use amongst ethnic groups (African American and Caucasian) was analyzed using chi-square tests to compare groups.

Results

The results are reported by research question. The first question concerned the types of contraceptive practices women have used in the past. In analyzing the data for past contraception use, findings revealed oral contraceptives, condoms, the morning after pill, and withdrawal were the most reportedly used by women in the past as contraceptive. Oral contraceptives were reported for past use by 75.9% of women ($n = 107$). Condoms had the highest positive report, with 94.6% of women ($n = 140$) claiming past use. The morning after pill was found to have a past use rate of 46.2% ($n = 60$). The percentage of women who reported past use of withdrawal as a contraceptive method was 46.3% ($n = 57$). See Table 1.

The second research question inquired about present contraception use. Data analysis for this research question revealed the same trends in contraceptive use. Oral contraceptives, condoms, the morning after pill, and withdrawal were the contraceptives reported most by women for present use. Oral contraceptives were reported for present use by 67.5% of women ($n = 92$). Present condom use was reported by 71.8% of women ($n = 102$). The morning after pill was found to have a present use rate of 5.9% ($n = 6$). The percentage of women who reported present use of withdrawal as a contraceptive method was 27.0% ($n = 27$). See Table 1.

The third research question asked about differences in contraceptive method use by ethnic group (African American and Caucasian). Data analysis of contraceptive method use by ethnic group indicated oral contraceptives were significantly more likely to be used by Caucasian women (73.9%; $n = 68$) than African American women (26.1%; $n = 24$) ($p = .002$). Clinically significant findings indicated that African American women (80.0%; $n = 4$) used the NuvaRing® contraceptive more than Caucasian women (20.0%; $n = 1$) ($p = .07$). More African American women (70.0%; $n = 7$) also reported using no method of contraception than Caucasian women (30.0%; $n = 3$) ($p = .08$). These findings did not indicate significant relationships in this sample. See Table 2.

Discussion

Many of the contraceptive behaviors being practiced both within and amongst ethnic groups are very concerning. Results showed oral contraceptives, condoms, the morning after pill and withdrawal were the most used by women both in the past as contraceptive methods and presently. This is concerning as two of the methods (the morning after pill and withdrawal method) are not effective in preventing pregnancy.

According to the American Academy of Family Physicians, the morning after pill, also commonly referred to as emergency contraceptive, is about 75-85% effective (Weismiller, 2004). This contraceptive is deemed effective at preventing pregnancy for up to 72 hours following unprotected intercourse, and the later it is taken the less effective it becomes. Additionally, this method is not intended nor approved for primary contraception use due to lower effectiveness and potential side effects.

The withdrawal method is also considered an ineffective method of birth control, as the failure rates for this method range from 4-19% (Mahendru, Putran, & Khaled, 2009). This contraceptive method, also termed coitus interruptus, is highly variable as it depends greatly on the level of self-control the male partner possesses.

The statistically significant finding indicating Caucasian women are more likely than African American women to use oral pill contraceptives is important due to the high effectiveness and accessibility of this contraceptive method. Reasons for this disparity in oral contraceptive use could stem from a variety of influences. According to two articles published in the *Journal of Adolescent Health*, a woman's social networks play a large role in determining contraceptive behaviors (Yee & Simon, 2010; Davies et al., 2006). These articles suggest that such social networks typically include mothers, friends, and sexual partners and could impact decision-making by serving as sources of information/misinformation, support/lack of support, and positive/negative vicarious experiences. Another influential factor contributing to oral contraceptive use could include access to healthcare resources, specifically health insurance offering contraceptive coverage (Heavey, Moysich, Hyland, Druschel, & Sill, 2008). Because oral contraceptives require a healthcare provider's prescription, limited access to such resources could hinder employment of this contraceptive method. Additionally, perceived attitudes of

healthcare providers and their willingness to assist in contraceptive education have also been shown to affect women's contraceptive practices (Frost et al., 2007).

Although not significant amongst this sample, findings revealing that African American women reported use of NuvaRing and no contraceptive method more than Caucasian women are important outcomes to investigate. These findings are primarily important due to the evidence they provide regarding the failure to protect against unwanted pregnancy and how this behavior is disproportionately higher amongst women identifying as African American. Additionally, these findings suggest variance in contraception use amongst ethnic groups, validating the need for continued research focused on contraceptive disparities.

Limitations

Participants completed the study's questionnaires through a secure, on-line link, in order to provide the most confidential setting and reduce response bias. However, this method of data collection inhibits participants from being able to ask questions and seek clarification during completion of the questionnaire. An interview or face-to-face survey style would allow the participants to seek further explanation when necessary. Additionally, this alternate method of questionnaire completion may decrease the amount of missing data within the study, another limitation faced by the researchers. Although a large sample size ($n = 196$) was used for this study, many of the findings were insignificant due to a low response rate. Guiding participants through each question would likely increase the number of responses received for each item, potentiating a greater number of significant results. However, researchers must keep in mind the effect a face-to-face survey may have on response bias and thus the accuracy of results.

Although the study was completed through an on-line questionnaire allowing anonymity and confidentiality, the high sensitivity of the questions presented in this study may have elicited a response bias nonetheless.

The sample of this study was taken from a large Midwestern university. Because the participants of the study were all college students, the results of this study are not widely generalizable to the population at large. Attendance at the university may indicate a higher level of knowledge regarding contraception than found amongst the general public.

Implications

Overall, the results of this study indicate strong preferences in oral pill contraceptives and condoms over other methods of birth control. Findings also indicate that disparities in contraceptive method use exist amongst African American and Caucasian college students. Combined, these outcomes create possible hypotheses for future research.

Ideally, women should be practicing dual method contraceptive behaviors, utilizing hormonal contraception to prevent unintended pregnancy in combination with condoms to protect against sexually-transmitted infections and further prevent pregnancy. Identification of contraceptive preferences lays the foundation for exploring the rationale supporting contraceptive decision-making. Understanding that some contraceptives are more likely to be used than others, and why this is so, allows practitioners to help clients choose effective contraceptive methods that best suit their lifestyles and with which they are most likely to be compliant. Determining rationale for contraceptive decisions also helps identify areas of weakness in contraceptive knowledge. Building off of this research to establish an understanding of this rationale allows practitioners to identify opportunities to dispel misconceptions and establish accurate and appropriate education.

Furthermore, identification of contraceptive disparities amongst African American and Caucasian women allows for more patient-centered care within nursing practice. When discussing highly sensitive information such as sexual behaviors with health practitioners, there is often response bias; clients may be apprehensive to offer full disclosure or may refrain from asking questions due to a fear of judgment resulting in shame or humiliation. Recognizing trends in contraceptive practices allows healthcare professionals to tailor their care to each client's specific needs, identifying areas of assessment with which the client may not be readily forthcoming but are important in understanding the client holistically and allowing her to make the most informed and effective contraceptive decisions.

Conclusion

Based on this study and its results, it is clear that disparities in contraceptive use amongst African American and Caucasian women exist. Furthermore it is evident that additional research regarding the rationale behind such disparities is needed is optimizing the usefulness of this data. It is the responsibility of healthcare providers to assess all facets of our clients' lives that may promote or impede optimal, holistic health and wellness. Educating healthcare practitioners on how and why our clients behave in regards to contraception use allows them to expand their cultural competence and individualize their care by allowing clients and providers to come together and discuss health concerns without cultural differences hindering the conversation, but enhancing it. While significant progress has been made in the discussion of contraceptive practices, additional research needs to be conducted exploring the motivating factors behind contraceptive use, maximizing the potential of this evidence by creating supplemental opportunities for intervention by healthcare professionals.

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Appendix

Table 1

Comparison of past contraceptive use methods with current contraceptive use methods

Contraceptive Methods	All Ethnicities	
	n	(%)
Oral Pill		
Past Use	107	(75.9%)
Present Use	92	(67.5%)
Patch		
Past Use	8	(6.7%)
Present Use	0	(0)
NuvaRing®		
Past Use	19	(15.7%)
Present Use	5	(5.7%)
Condoms		
Past Use	140	(94.6%)
Present Use	102	(71.8%)
Diaphragm		
Past Use	1	(0.8%)
Present Use	1	(1.2%)
IUD		
Past Use	4	(3.4%)
Present Use	4	(4.5%)
Implanon		
Past Use	1	(0.9%)
Present Use	3	(3.5%)
Abortion		
Past Use	4	(3.4%)
Present Use	1	(1.1%)
Morning-after Pill		
Past Use	60	(46.2%)
Present Use	6	(5.9%)
No Method		
Past Use	22	(19.5%)
Present Use	10	(11.1%)
Withdrawal		
Past Use	57	(46.3%)
Present Use	27	(27.0%)

Note: AA=African American, EA/C=European American/Caucasian

Table 2

Comparison of current contraceptive use methods amongst African American and Caucasian women

Contraceptive Methods Presently Used	AA		EA/C		χ^2	p
	n	(%)	n	(%)		
Oral Pill	24	(26.1)*	68	(73.9)*	9.37	.002*
Patch	0		0			
NuvaRing®	4	(80.0)	1	(20.0)	3.83	.07
Condoms	38	(37.3)	64	(62.7)	1.26	.34
Diaphragm	1	(100.0)	0		1.60	.39
IUD	1	(25.0)	3	(75.0)	.31	1.0
Implanon	2	(66.7)	1	(33.3)	.96	.56
Abortion	0		1	(100.0)	.68	1.0
Morning-after Pill	2	(33.3)	4	(66.7)	.13	1.0
No Method	7	(70.0)	3	(30.0)	4.22	.08
Withdrawal	8	(29.6)	19	(70.4)	1.37	.26

Note: * $p < .05$. AA=African American, EA/C=European American/Caucasian